

CLAIMS

1. A method for evaluating moving image quality of displays based on a blurring of a scrolled test pattern displayed on a screen of a display device subject to evaluate, the method
5 comprising the following steps (a)-(f) of:

(a) capturing an image of the scrolled test pattern while the test pattern being scrolled and the field of view of an image sensor pursuing with a move of the test pattern;

(b) observing a first blurred edge along a scrolling
10 direction that appears in the captured image of the scrolled test pattern;

(c) capturing an image of a still test pattern by the image sensor while moving the field of view of the image sensor at a same velocity as that at which the field of view of the image
15 sensor pursues a move of the scrolled test pattern;

(d) observing a second blurred edge along the scrolling direction that appears in the captured image, which is the image of the still test pattern captured by the image sensor;

(e) estimating the moving velocity of the scrolled test
20 pattern based upon the second blurred edge width and the exposure time of the image sensor at which the image of the still test pattern was captured, and normalizing the first blurred edge width by using the estimated moving velocity of the scrolled test pattern; and

25 (f) evaluating moving image quality of the screen with

use of the normalized first blurred edge width.

2. The method for evaluating moving image quality of displays according to claim 1, wherein in the step (a), the field
5 of view of the image sensor is moved at a variety of velocities to capture an image of the scrolled test pattern, which is scrolled at an arbitrary velocity, and a moving velocity of the field of view of the image sensor, at which the first blurred edge width appeared in the captured image is the smallest, is
10 determined to be the velocity at which the move of the scrolled test pattern is pursued.

3. The method for evaluating moving image quality of displays according to claim 1, wherein in the step (a) the
15 scrolled test pattern is scrolled at an arbitrary velocity, the field of view of the image sensor is moved at a variety of velocity, consecutive images of the scrolled test pattern are captured at the each velocity, and a moving velocity of the field of view of the image sensor, at which the move of positions of
20 blurred edge in the captured consecutive images is the smallest in the moving direction, is determined to be the velocity at which the move of the scrolled test pattern is pursued.

4. The method for evaluating moving image quality of displays
25 according to claim 1, wherein in the step (b), the first blurred

edge width corresponds to the difference in pixel number between a position at which the luminance is higher than the minimum luminance by a predetermined threshold ratio or predetermined threshold value and a position at which the luminance is lower
5 than the maximum luminance by a predetermined threshold ratio or predetermined threshold value in a luminance distribution profile focused on the detector of the image sensor.

5. The method for evaluating moving image quality of displays
10 according to any of claims 1 and 4, wherein in the step (d), the second blurred edge width corresponds to the difference in pixel number between a position at which the luminance is higher than the minimum luminance by a predetermined threshold ratio or predetermined threshold value and a position at which the
15 luminance is lower than the maximum luminance by a predetermined threshold ratio or predetermined threshold value in a luminance distribution profile focused on the detector surface of the image sensor.

20 6. The method for evaluating moving image quality of displays according to claim 1, wherein in the step (e), the exposure time of the image sensor is determined from an image of still test pattern focused on the detector surface of the image sensor while moving the field of view of the image sensor at a known
25 velocity.

7. The method for evaluating moving image quality of displays according to claim 1, wherein in the step (e), the exposure time of the image sensor is determined by capturing an image of pulsed
5 light with a predetermined period, and measuring the number of times of detection of the light appearing on the detector plane of the image sensor.

8. A system for evaluating moving image quality of displays
10 based upon a blurring of a scrolled test pattern displayed on a screen of a display device subject to evaluate, the system comprising the following means (A)-(D):

(A) means for capturing an image of the test pattern while moving the test pattern on the screen at an arbitrary velocity
15 with the field of view of an image sensor pursuing the move of the scrolled test pattern, and observing a first blurred edge along a moving direction that appears in the captured image of the scrolled test pattern;

(B) means for capturing an image of still test patterns
20 by the image sensor while moving the field of view of the image sensor at the same velocity as that at which the field of view of the image sensor pursues the move of the scrolled test pattern, and for observing a second blurred edge along the scrolling direction that appears in the captured image, which is the image
25 of the still test pattern captured by the image sensor;

(C) means for estimating the moving velocity of the scrolled test pattern based upon the second blurred edge width and the exposure time of the image sensor to capture the image of a still test pattern, and normalizing the first blurred edge width by using the estimated moving velocity of the scrolled
5 test pattern; and

(D) means for evaluating moving image quality of the screen with use of the normalized first blurred edge width.